

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number
WO 2004/018507 A1

- (51) International Patent Classification⁷: **C07K 14/315**, A61K 39/09 (74) Agents: LUZZATTO, Kfir et al.; Luzzatto & Luzzatto, P.O. Box 5352, 84152 Beersheva (IL).
- (21) International Application Number: PCT/IL.2003/000687 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 19 August 2003 (19.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 151436 22 August 2002 (22.08.2002) IL (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
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- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: COMPOSITIONS AND METHODS FOR TREATMENT AND PROPHYLAXIS OF INFECTIONS CAUSED BY GRAM POSITIVE BACTERIA

(57) Abstract: The invention relates to methods of treatment, compositions and uses of an isolated and purified peptide for the inhibition of an invasive and/or non-invasive infection of Gram-positive pathogenic bacteria. A specific peptide comprises an amino acid sequence substantially homologous to the amino acid sequence encoded by the *sil*CR ORF of the *sil* locus at position 2985 to 2863 of the complementary strand of the genomic sequence of Group A Streptococcus (GAS) bacteria specified in GenBank accession number AF493605. Preferably, the peptide of the invention comprises an amino acid sequence DIFKLVIDIISMKARKK, also denoted by SEQ ID NO: 32 or any functional fragment, analog or derivative thereof. The invention further relates to methods for inhibiting an invasive and/or non-invasive infection of Gram-positive pathogenic bacteria, using an agent such as the peptide of the invention, which induces down regulation and/or inhibition of chemokine protease activity.